

**MISSOURI
2013-2014**

WATERFOWL HABITAT AND HUNTING SEASON REPORT

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2013-14 WATERFOWL SEASONS

Zone	Youth Hunt	Ducks	Canada Geese & Brant	White-fronted Geese	Light Geese (snow, blue, Ross's)*
NORTH	10/19-10/20	10/26-12/24	10/5-10/13 11/28-1/31	11/28-1/31	10/26-1/31
MIDDLE	10/26-10/27	11/2-12/31			
SOUTH	11/23-11/24	11/28-1/26			
*The Conservation Order for light geese will be in effect from February 1-April 30 with no bag limit. Hunters may use electronic calls & unplugged shotguns, & shoot from ½ hour before sunrise to ½ hour after sunset. A Conservation Order Permit is the only permit required for residents & nonresidents during this time.					

Waterfowl hunting opportunity in Missouri began with the statewide teal (9/7-9/22), and Canada goose (10/5-10/13) seasons followed by the Youth Hunting weekends, the opening of the North, Middle, and South Zone duck seasons and late season goose hunting. Missouri duck seasons have been 60 days in length since 1997, with bag limits the same as allowed in the federal framework. Missouri has traditionally offered youth waterfowl seasons the weekend before the regular duck season in each zone. The 2013 Missouri Canada goose season was 74 days in length with an early segment of nine days and a late segment, beginning on Thanksgiving Day, of 65 days. The daily bag limit was three birds during both the early and late segments.

Weather, Habitat, and Migration:

Fall and Winter Habitat:

The spring and summer of 2013 was quite wet across Missouri in contrast to the severe drought conditions experienced in 2012. This helped irrigate the soil and provided good germination and growing conditions for production of moist soil vegetation in some areas. However, flooding along the Mississippi River extended well into summer and hampered the production of both moist soil vegetation and agricultural food plots on areas in the state located adjacent to the Mississippi including Ted Shanks and Columbia Bottom Conservation Areas. Similarly, an August flood reduced the habitat quality at wetlands in and around Four Rivers and Schell-Osage Conservation Areas in western Missouri. Mild conditions in late summer and early fall allowed moist soil vegetation to recover in locations where it had been set back or had a slow start such as Ted Shanks. October rainfall was variable across Missouri, averaging mostly above normal over western and southern sections and near to below normal for the rest of the state. In contrast, moderate to severe drought was still impacting the northern half of Missouri. By this time, moist soil vegetation was mature and managers at 13 of 15 Missouri Department of Conservation intensively managed wetland areas rated production as fair to good with the remaining two (Ted Shanks and Columbia Bottom) reporting production as poor. The condition of floodable crops

was variable. Managers at approximately half of the intensively managed wetland areas reported crop production as fair to good whereas the other half reported poor or no crop production. The areas with no floodable crops (Ted Shanks, Montrose, Schell-Osage, and Four Rivers) experienced extended wet periods or summer flood events. On private land this year the timing of corn, soybeans, and rice harvest was normal. Eighty-two percent of corn and ninety-three percent of soybeans were harvested across the state by the first of November. This was in stark contrast to last year, when the 2012 corn harvest was 39 days ahead of normal by the first of November.

November temperatures in Missouri averaged 41.5°F, or 2.7°F below the long-term average, making it the coolest November since 2000. Strong winds originating in the arctic created these below average temperatures by sweeping across the state repeatedly throughout the month. Fronts blew through between the 10th and 12th and then again on the 16th and 17th. Another substantial cold front was felt between November 22nd and 24th, followed by more arctic air on the 26th and 27th. These conditions began to freeze up shallow water habitats in northern Missouri.

The trend continued in December with brief periods of mild temperatures followed by sustaining periods of below freezing conditions. Wintery precipitation fell across the southern half of Missouri on the 5th and 6th with total snow accumulations ranging from 6 to 10 inches with locally higher amounts of up to a foot at a few locations. Across the state temperatures plummeted with many record lows. On December 14th mid-Missouri received 2-4 inches snow. By this time much of the shallow water habitat on publicly managed wetland areas was froze shut. The only open water available to birds was on large water bodies, areas with flow or wind fetch, or where concentrations of winter hardy birds had kept the ice at bay. Then on the 20 and 21st snow fell across northwest Missouri and averaged between 4-8 inches in depth. In southeast Missouri this system dropped 3-6 inches of rain which swelled ditches and rivers, causing flooding to occur across the region that had just thawed out from the previous snow and ice cover. By the end of the week on the 29th temperatures dipped back below freezing across the state.

From January 5-8, over 125 low temperature records were set at different weather stations across the state as lakes even began to freeze up and pack ice formed on sections of the Missouri and Mississippi Rivers. In the middle of January a brief warming trend began to thaw out some of the icy conditions in the southern half of the state. However, shallow water habitats further north still had 6-8 inches of ice. The waterfowl season ended similar to the way it started in that December and January were the coldest since December 2000 and January 2001.

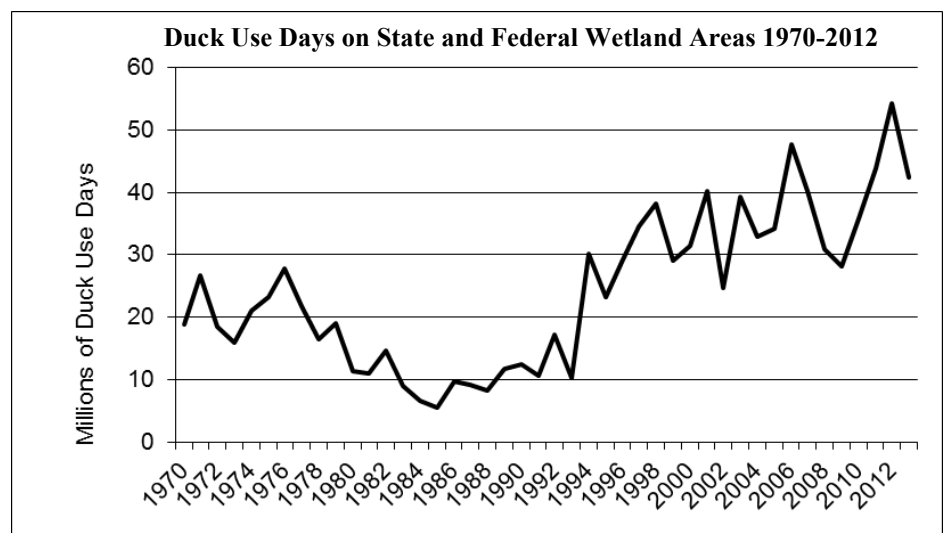
Waterfowl Migrations:

The late spring of 2013 likely influenced the migration timing of early fall migrating species. Many northern locations experienced later than average ice-out dates (e.g., Minnesota's spring ice-out days were 10-20 days later than average across the state, 2013 Waterfowl Breeding Population Survey for Minnesota) resulting in both delayed arrival dates and nesting efforts on the breeding grounds. Anecdotally, it appeared that early fall migrants arrived in Missouri approximately 1-2 weeks later than average. This was particularly evident during the September teal season which is timed to take advantage of the peak numbers of blue-winged teal migrations. This past season, however, a noticeable increase in blue-winged teal did not occur in Missouri until a cold front moved through the state on September 20-21. The resulting increase in teal occurred with only 2-3 days remaining in the teal season. Another movement of teal occurred with a front on October 4-6, well after the season in Missouri had closed.

Through mid-October blue-winged teal were the dominant species on Missouri's managed wetland areas. Numbers of other early season migrants began to steadily increase during the latter half of October. A migration movement that occurred October 18-21 also saw an increase of white-fronted geese in the state. Another movement occurred over the period of November 5-6. Overall ducks numbers continued to steadily increase through November with the first significant increase in mallards occurring November 11-12. Early season dabbling numbers (e.g., pintail, gadwall, wigeon, and shovelers) peaked across the state in the middle of November with numbers beginning to fall off by the end of the month. Ring-necked duck and snow geese numbers also increased during mid-November. Mallard numbers continued to build through the week of Thanksgiving with another movement occurring November 23-24. Total duck numbers reached a record peak of 1,303,500 on state and federally managed wetland areas during the fourth week of November as ice began to lock up shallow water habitats in northern Missouri. Another strong cold front brought wintry precipitation to Missouri over the period of December 5-8 resulting in a sharp drop in the number of early migrant species, an influx of Canada geese, and reshuffling of mallards throughout the state. Air temperatures remained below freezing for an extended period resulting in freeze up of shallow wetland habitat across the state. By the third week of December total waterfowl numbers had dropped with substantial bird movement December 19-20. Another large departure movement occurring the night of December 22; surveys conducted after this movement estimated approximately 166,070 ducks remained on publicly managed areas. These numbers were similar to those witnessed in 2000, which was another harsh winter for Missouri in which below freezing temperatures were experienced for much of December. In early January only mallards and a few green-wings remained in certain locations. Around January 15th waterfowl and geese began returning to southeast Missouri from more southern locations as conditions began to thaw out. During this time considerable movements of snow geese, white-fronted geese, and Canada geese were reported in different locations around the state.

Despite the below freezing conditions that persisted through the latter half of the 2013 season, Grand Pass recorded its second highest duck use days total and Clarence Cannon recorded its third highest. Areas in the North Zone reflected the steady increase of bird numbers that occurred throughout November resulting in duck use days almost double the five year average for the month. A similar trend occurred on

areas in the Middle Zone as duck use days for November were slightly above the 5 year average. Waterfowl abundance fell below the 5 year average during December in all three zones. The total duck use days in the state for this year was 42.46 million which is 22% lower than last year. This decline in duck use days is not surprising given that the 2012 season was relatively mild with no



extended periods of freezing temperatures resulting in birds staying in the state for a protracted time whereas freezing conditions persisted throughout much of December 2013 and early January 2014 resulting in bird departure. The harsh winter weather was also reflected in our Midwinter Waterfowl Survey which was scheduled for January 6-10; however, adverse weather conditions prevented conducting the aerial portion of the survey until January 11-12. A total of 396,079 ducks were documented during the survey which represents a 36% decrease from last year's total of 621,976. The two years illustrate a great example of the effect that winter weather severity has on waterfowl migration and abundance for a mid-latitude state like Missouri.

Duck and Goose Harvest:

Preliminary estimates indicate that hunters took 35,453 trips on MDC areas and harvested 82,699 ducks. This harvest was approximately 20% lower than the record harvest of 104,184 ducks in 2012-2013, but it was still near the previous five-year average harvest of 86,533. The average of 2.33 ducks per trip was the same as the previous year. The lower harvest on MDC areas during 2013-2014 was primarily driven by a large number of days when shallow water habitat was frozen up. Many MDC Areas in north Missouri froze up around November 24, briefly opened back up, then froze up again around December 7 and remained in that condition through the end of the season. North Zone MDC areas experienced approximately 26 days with substantial ice. MDC Areas in west-central Missouri froze up from December 7-19 and then again for several days at the end of the season. These areas were frozen up for around 18 days of the season. Conditions were less severe in southeast Missouri, but MDC areas in the Middle Zone in southeast Missouri still had roughly 7 days with ice more than two inches thick. The manager at Ten Mile Pond CA located in the South Zone in southeast Missouri reported 19 days with substantial ice.

Prior to freeze up, hunting on both private and public wetlands with good water and habitat conditions was excellent. On MDC areas, North Zone hunters maintained a 3.12 daily duck per hunter average prior to freeze up. After December 7, North Zone hunting was primarily limited to field hunting and the limited remaining open water. Middle Zone hunters who hunted on MDC managed wetlands maintained a 2.45 average until December 7 when shallow water initially froze up. Hunting success declined thereafter. Similar to the North Zone, hunters did report good late season field hunting for mallards. South Zone hunting was much more variable depending on changes in weather conditions and the amount of ice present.

Duck harvest on MDC managed wetlands provides an early indication of statewide harvest. Hunters on MDC areas harvest only a small portion of the statewide total number of ducks and this proportion has not increased in recent years. The proportion of ducks harvested on public areas in 2012-13 (15.3% of a statewide total of 679,761) was similar to the average of 14.4% (range = 12.4-16.5%) from 1988-1997. During dry years, MDC areas with water pumping capabilities typically account for a higher proportion of the statewide duck harvest than during wet years. If this year's harvest on MDC areas represents 12%-19% of the statewide harvest, the harvest could range from 435,300 to 689,200 ducks. This estimate would fall within the range experienced during past 60-day seasons (378,100-679,761).

Canada Goose Harvest: The first major push of migrant Canada geese occurred from December 5-8 and substantial number of Canada geese were present through the close of the season on

January 31. The statewide count of Canada geese during the 2013 Midwinter survey was 212,000, up from 152,600 in 2012 and similar to the higher numbers observed during 2009 (195,200), 2010 (248,900), and 2011 (188,500) when weather conditions were more favorable for Canada geese. Canada goose harvest in 2013-14 is expected to be higher than the 2011 and 2012 seasons when milder winter conditions prevailed and similar to the record seasons in 2009 and 2010. However, some hunters did note that Canada geese tended to be more difficult to decoy this year. Similar to the previous six years, Canada goose hunters benefited from regulations that were 25% more liberal than before which offered additional late season opportunity.

White-fronted Goose Harvest: The number of white-fronted geese present in Missouri continues to grow. Small flocks are now observed periodically throughout fall and winter throughout the state. The greatest numbers are found in southeast Missouri. Harvest is expected to be similar to previous years.

Light Goose Harvest: The total light goose harvest in Missouri increased from an average of 16,535 during the 10 years prior to the Conservation Order (CO) (1988-1997 regular season) to an average annual harvest since 1998 of nearly 160,000 (regular season plus CO), a 10-fold increase. The estimated statewide harvest of light geese for 2012-13 was 100,027 during the regular season and 223,267 during the Conservation Order. The early freeze up likely reduced snow goose hunting opportunity during the regular snow goose season. The first major spring migrations of snow geese occurred the week of February 16. It is uncertain how the delayed spring will influence participant success during this year's Conservation Order.

Waterfowl Disease Surveillance: No waterfowl disease outbreaks reported.